

OLDEST BEE PAPER
IN AMERICA

THE AMERICAN BEE JOURNAL

ESTABLISHED
IN 1861

DEVOTED EXCLUSIVELY TO PROGRESSIVE BEE CULTURE.

Vol. XVIII.

Chicago, Ill., November 1, 1882.

No. 44.

THE AMERICAN BEE JOURNAL

Published every Wednesday by

THOMAS C. NEWMAN,

EDITOR AND PROPRIETOR.

925 WEST MADISON ST., CHICAGO, ILL.

At \$2.00 a Year, in Advance.

Any person sending a club of six is entitled to an extra copy (like the club) sent to any address desired. Sample copies furnished free.

George Neighbour & Sons, London, England, are our authorized agents for Europe.

Postage to Europe 50 cents extra.

Entered at Chicago post office as second class matter.

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Sowing Alsike Clover.—A correspondent asks for information on this subject. When planted alone sow in the spring from 3 to 4 pounds to the acre. When mixed with white or red clover, sow about 2 lbs. to the acre. Timothy or red clover will do no harm, as they may be cut early enough, so that the Alsike will be the only plant ripe enough to furnish seed. Moist land is best for it. It should not be sown with grain. Some advocate its being sown in drills, in order to keep the weeds down.

Mr. Baldridge, who has had considerable experience with Alsike as a honey plant, says:

It is much the better way to mix Alsike with timothy, or the common red clover, or both. When thus mixed they are a help to each other. The Alsike being a native of a cold climate, does not winter-kill, and besides, it acts as a mulch in winter and spring to the common red, and keeps the latter from being destroyed by the heaving-out process. As the red clover shades the roots of the Alsike, which grow close to the surface, it protects the latter from the effects of drouth.

The timothy and red clover being both upright growers, lift and keep up the Alsike from the ground, which is very desirable. The stem of the Alsike is too fine to support its many branches in an upright position, and hence is more inclined to lodge than the common red.

For the reasons given, the combination of the three named plants is very important, and will prove successful wherever tried.

The Vice President for Conn. Mr. Jeffrey, reports 80,000 colonies of bees in that State, and then adds that 95 per cent. of them are in box hives! Talk about progressive bee-keepers!

Preparing Bees for Winter.—Quite a number of queries have been propounded, besides those answered in this issue of the BEE JOURNAL, on this very important subject. In order to answer them all, without repeating, we shall, in the next issue, give some very full instructions on the subject, including Mr. D. A. Jones' plan for preparing bees for winter by five different methods. He says:

I have tried all the different methods; spent thousands of dollars in experimenting, and have no hesitation in saying I have had a larger and more varied experience than any other bee-keeper. I have succeeded for years in wintering by the system which I have adopted, and hundreds of others have been successful who have carefully followed the same instructions and directions.

On page 676, tenth line from the top of the last column, for 400 pounds to the colony, read 100 pounds. Here, at least, one figure makes a vast difference. Thanks to Mr. Scudder for calling our attention to it.

The Langstroth Fund.—The money raised at Cincinnati, O., and forwarded to Mr. Langstroth, was as follows, as far as we can determine:

E. Parmly, 19 W. 38th St., N. Y., \$50; D. A. Jones, Beeton, Ont., Can., \$20.00 (\$10.00 cash and a queen that afterwards sold for \$10); A. J. Cook, Lansing, Mich., and A. I. Root, Medina, Ohio, \$10 each; Dr. C. C. Miller, Marengo, Ill., \$5.00; Dr. Blanton, Greenville, Miss., \$2.00. The following persons contributed \$1.00 each; E. B. Vincent, Sunman, Ind.; J. M. Hyne, Stewartsville, Ind.; Christopher Grimm, Jefferson, Wis.; B. Price, Iowa City, Iowa; Rev. L. Johnson, Walton, Ky.; H. B. Harrington, Medina, O.; four "friends," each; Herrick; E. Peleman; E. G. Lewis, Ben Mullen, T. B. Hunt, and a friend, 50 cents each. Two "friends," 25 cents each. Total, \$112.50. We have given full addresses where they were given to us.—Gleanings.

The Purity of Honey.

Mr. J. O. Todd, Richmond, Iowa, writes us as follows:

I wish you would inform us, through the BEE JOURNAL, what constitutes pure honey. I have a large crop of honey this year, and some of the incredulous have said it must be adulterated. I know it is not; and when I have good authority as to the ingredients of pure honey, I wish to have mine analyzed and prove to the unbelievers that a large crop of honey is but the honest reward of the modern system of bee-keeping.

Honey is a substance so well known that it would seem almost a waste of space to describe it; and yet there are many things about its composition that are so varied by locality and the bloom from which it is obtained, which are generally unknown, that it may be well to answer the above question rather in detail.

Honey is solely a vegetable product, not made, but gathered from the nectar of flowers, where it is secreted in fine weather according to the rules of Nature's laboratory. Each flower yields honey of its own peculiar flavor, which, if not gathered, is soon evaporated and lost.

Honey, fresh from the comb, is clear, translucent, slightly amber-colored, and viscous, becoming granular in time, with whitish, transparent crystals. In taste and smell, it is sweet, agreeable and aromatic. It should not irritate the throat when eaten, and its peculiar flavor should be so decided, that it can be readily detected when mixed with other articles of diet.

Honey derived from the blossoms of cruciferous plants, granulates or crystallizes speedily—often, indeed, while yet in the comb, before removal from the hive; while that from labiate plants, and from fruit trees in general, maintains its original condition unchanged for several months, after being extracted from the comb. Honey produced in northern climates likewise crystallizes sooner than that from southern countries.

"Under the microscope," says the *Druggists' Advertiser*, "the solid part of honey is seen to consist of myriads of regularly-formed crystals; these crystals are for the most part exceedingly thin and transparent, and very brittle, so that many of them are broken and imperfect; but when entire, they consist of six-sided prisms, apparently identical in form with those of cane sugar. It is probable,

however, that these represent the crystals of dextrose, as they occur in honeys from which cane sugar is nearly or wholly absent. Intermingled with the crystals may also be seen pollen granules of different forms, sizes and structure, often in such perfect condition that they may be referred to the particular plant from which the juices have been gathered."

The Rev. L. L. Langstroth remarks that "honey and sugar contain, by weight, about eight pounds of oxygen to one of carbon and hydrogen."

The chemical properties of honey are as varied as the sources from which it is obtained; and therefore it would be difficult to give any universal rule to prove the query propounded by our correspondent, viz.: "What constitutes pure honey?"

Prof. Kedzie, of the Michigan Agricultural College, has written an article on this subject which we will append, as it is very pertinent to the subject. It is as follows:

Honey is one of the oldest things under the sun. At one time it was probably the only form of sugar known, and to-day is one of our most delicious articles of food. Does it not seem strange, then, that in this scientific age so little is known of its real composition or the changes it undergoes? Honey is composed of grape and sugar cane, together with water, acid and waxy matters. If honey be burned completely, a grayish colored ash remains, which amounts to about fifteen per cent. of the original honey. In this ash I succeeded in obtaining reactions for silica, lime and iron. There is also a small quantity of potash and phosphoric acid in honey. To estimate the quantity of these present I took two portions of "cap" honey, free from pollen and wax, and burned them to a coal-like mass. In one I extracted the potash with muriatic acid, and in the other, phosphoric acid with nitric acid, and estimated them in the usual manner.

The following are the amounts obtained: Potash .06 per cent.; phosphoric acid .08 per cent. These substances would naturally be present in honey, as they are found in soils, and circulate in the juices of plants. There are many things connected with honey about which, at the present time, but little is known. The following are a few:

1. Has honey a definite composition? Is there any difference between the relative amount of sugar in honey made from buckwheat, basswood, clover, goldenrod, brown sugar, etc., or between the relative amounts of cane and grape sugar? Probably this question can be answered only by comparing the analysis of different kinds of honey.

2. Does the bee add anything to nectar in changing it into honey? On

this point there is wide difference of opinion. But I know of no experiments having been tried to settle the matter. Perfectly pure honey, that has been dried completely, contains about one per cent. of nitrogen. Does the bee supply this nitrogenous matter? To decide this I gathered some nectar from flowers in the Agricultural College green-house (from the azalia, rhododendron, and fuchsia, but principally from the last), and carefully tested it for nitrogen. The result of my experiments is that nectar does contain traces of nitrogen. Therefore, the fact that honey contains nitrogen does not prove that it was furnished by the bee. May not this question be decided by feeding bees upon pure white sugar, which contains no nitrogen, and afterward examine the honey to see if any nitrogenous matter has been added to it?

3. After honey has staid for a certain length of time, a part of the grape sugar crystallizes out, and granulation or candying is the result. The cause of this change is not known. May not the conditions under which granulation occurs be obtained by a series of experiments, by keeping honey at different temperatures, etc.? Answers to these questions may not advance the market a particle, but we shall enjoy the satisfaction of knowing the truth of the whole matter.

In the BEE JOURNAL, page 662, at the bottom of the second column, Mr. J. M. Hicks was made to say he "had averaged 500 lbs. of honey per colony, from alsike clover," in the report of the National Convention. It should have read that "Mr. Hicks said that alsike clover, in a good season, would yield 500 lbs. of honey per acre." In writing us of this error, Mr. Hicks adds: "I obtained 718 lbs. of extracted honey from one colony of Holy Land bees." So that he has even surpassed the amount, in one instance at least, stated in the paragraph on page 662. Mr. Hicks adds: "Bees have done splendidly here during the latter part of August and all of September."

Preparation of Honey for the Market, including the production and care of both comb and extracted honey, instructions on the exhibition of bees and honey at Fairs, etc. This is a new 10 cent pamphlet, of 32 pages.

We will send Cook's Manual in cloth, or an Apiary Register for 100 colonies, and Weekly BEE JOURNAL for one year, for \$3.00; or with King's Text-Book, in cloth, for \$2.75; or with Bees and Honey, in cloth, \$2.50. The Monthly BEE JOURNAL and either of the above for one dollar less.

Crop Report in Los Angeles Co., Cal.

We see that Mr. W. W. Bliss, in the *California Apiculturist*, for October, speaking of the report sent to the North American Bee-Keepers' Society, as published on page 693 of this issue, says:

I advertised through the *Apiculturist* for the names and addresses of all who kept bees in Los Angeles county. From that advertisement I received not one name from any one who is now keeping bees.

Mr. Gallup, of Santa Ana, was the only one who seemed to take any interest in the matter. He sent me the names, addresses, and number of colonies of 36 bee-keepers.

These, with the names I had, comprised a list of 65, to whom I sent blanks to be filled out and returned, and up to date I have received but 18.

Since the report was sent, I have received the following: 614 colonies of bees, 8,000 lbs. of comb honey, and 64,000 lbs. of extracted honey.

Mr. Gallup's report and the one above included, makes 4,864 colonies of bees in the county, that I could get any account of.

Now, I for one am ashamed to send in such a report as this, but it is the best that I could do. Some of the bee-keepers were very careless in filling out the blanks after they were sent to them. Some did not state whether the bees were Italian, hybrid, or black, and in those cases I put them down as the latter. Others sent reports of those out of the county, etc. Kind friends, do not think I am saying this to find fault, only to show you your mistakes, that you may do better next time.

I wish to make a suggestion, i. e., that every bee-keeper keep a correct record of everything taken from their respective apiaries, that brings in the cash, and let us see if we cannot present a better report for the year 1888.

Some will remember that last year we called for crop reports for the whole country and obtained statistics of only 520 colonies for California. Thereupon, a writer in the "Semi-Tropic California" roundly abused us for such a report, when the assessor of Los Angeles county alone had found some 17,000 colonies there. Time cures everything; the above from the "California Apiculturist" completely vindicates our report of last year. If the bee-keepers there do not take the trouble to report, they cannot expect to be correctly represented. Mr. Bliss gives some good advice to them, which we hope will be heeded.

Mr. Wm. Muth-Rasmussen, of Independence, Cal., also writes as follows, in that paper:

I have through the "Apiculturist," as well as by private correspondence, solicited reports for the National Convention, from the bee-keepers of this

State, and particularly from the secretaries of the various county associations, and have supplied many with blank forms to be filled out, and returned to me by the 15th of this month. After waiting for seven days over the appointed time, I closed my report, in order that it may reach the President in time for the Convention.

I have but a poor showing to make for this State. Many, to whom I sent blanks, have not responded, and others were unable to obtain statistics. As I could not answer each one individually, allow me hereby to thank those who have sent me their reports. To them, who have not responded, I can only say that they stand in their own light. We all know, that it has been a poor honey season, but that is no reason why not at least the number of colonies of bees should be given, from which an estimate might be formed of the extent of the industry, and the amount of honey and wax the State is capable of producing in an ordinary good season.

I am disappointed at the lack of interest shown in this matter. California ought to stand as the banner-State for bee-culture, even if it has occasional failures, and I doubt not that her number of bee-keepers and colonies of bees would far eclipse any other State in the Union if the bee-men would take pride enough in their vocation to make a report of what they have, and what they can do, when Providence favors them.

We need more light. We must keep up with the times, or else take a back seat. No bee-keeper can afford to be without one or more bee papers, through which he is posted on the fluctuation in the price of his products. Improved bee-culture, although of recent date, has already reached such a point, that only he who keeps abreast of the leaders can make a success of it. The old fogies, who are hanging on behind, will soon miss their hold and drop off, to be replaced with a more intelligent class.

Thereupon the editor remarks as follows:

The report of Mr. Muth-Rasmussen, California's Vice President of the National Bee-Keepers' Society, certainly does California a great injustice. This is, however, no fault of Mr. M., as will be seen from his explanation in another column. Mr. M. discharged his duty faithfully. Notices from him to some of the secretaries of associations in other counties, passed through our hands and were promptly forwarded. Owing to the failure of the season, but little interest has been taken by apiarists, who do not feel like reporting blasted hopes. The amount is probably not more than about one-fourth as much as should have been reported. It is hoped that apiarists will see the importance of making a correct report hereafter, as it will enable the producers to determine the best time for marketing their honey and the price to be realized for the same, and buyers will know better what they can afford to pay. Those who have been actively engaged in collecting the

honey statistics of the State, we trust will be afforded greater facilities and a more general interest taken in the work when more reliable information will be obtained.

We have received Mr. D. A. Jones' new Circular and Price List of Bees and Apiarian Supplies. In this pamphlet of 24 pages may be found Mr. Jones' ideas upon Wintering Bees in Bee Houses, cellars, clamps, chaff and in dry goods boxes, packed. It is beautifully illustrated, and makes a handsome appearance. Mr. Jones is one of the most extensive bee-keepers in America, and has had much experience with bees.

**MISCELLANEOUS.**

Seasonable Hints.—The *American Agriculturist* for November, contains the following:

A subscriber asks if sugar can be safely fed to bees in winter. There is no other food so good for bees as pure sugar. The granulated form is best. All bee-keepers that have fed this sugar for winter stores are agreed that it is even superior to honey for bees. This is owing, doubtless, to its composition, as it contains more cane sugar, and also to the absence of pollen, which is to be found in all honey. While pollen generally does no harm to bees in winter, it is not good in some cases and may be the cause of fatal dysentery. Dissolve the sugar for feeding in an equal bulk of water, and heat until it boils, and when cold it is ready to feed.

It will be remembered that many bees were lost during the winter of 1880-81, from neglect. They were caught by the exceptionally early season. They need at least 30 pounds of good food per hive, and they should be crowded upon just enough frames to contain them, by using division boards. If the bees are to be packed, this should be done as early as Oct. 1st, and if chaff hives are used, the packing above and at the ends of the frames should be added at the same time. It is always best to have the fine chaff or sawdust in sacks. However we winter, whether in chaff hives, or in the common hives with chaff packing, or in cellars, it will always pay to pack above and at the sides of the frames. The hives should be put into the cellar as early as November 1st, before the severe weather sets in. The hives should be dry when set in, and, in the removal, disturb the bees as little as possible. When in the cellar, remove the tops of the hives, but not the chaff pillow. The entrance should be left open.

An East Indian climbing a Tree in search of *Apis Dorsata*.

Some time ago we published an engraving, showing the home of Mr. Frank Benton, in the island of Cyprus, which he has since left to go to Suk-el-Gharb, Mount Lebanon, in Palestine, Asia. Now we present an engraving of a native East Indian (Cingalese) climbing a tree, in search of the "giant bees," found only in the island of Java—the *Apis dorsata*. Our readers will



remember the many articles published a year ago in the BEE JOURNAL, concerning Mr. Benton's journeys in the far East in search of these giant bees, and of his sad failure to procure any of them. The engraving on this page is from a drawing which he sent to Mr. Root then, and explained in the last *Juvenile Gleanings*.

Making Tin Cans Tight.—Mr. J. M. Brooks, Columbus, Indiana, writes to *Gleanings in Bee-Culture* on the above subject, and gives his experience as follows:

Being a tinner by trade, I will give you the plan we used to test our fruit-cans with at the shop. Get a thick piece of harness leather, a little larger square than the mouth of your cans. Next place a lighted lamp or candle in front of you, and a cup of alcohol at your left. Now with a bit of sponge touch the alcohol, then the candle; drop it burning into the can, and place the leather (previously softened with

water) over the mouth of the can, and hold it down to exclude air. The burning alcohol destroys the air in the can, forming a strong vacuum. After two or three seconds (not longer), if in pulling off the leather it comes off with a crack, or report, the can is tight; while those from which the leather comes off easily, without resistance or report, are faulty. Such can be quickly tested, and the leaks found, by applying your mouth to the seams, and trying to suck air through them. I think, after giving this plan a trial, and "kind o' get the hang on't," that you will like it, as being the quickest, neatest and cleanest.

Best Size for a Colony in Winter.—The *Country Gentleman* gives the following on this subject:

Considerable controversy has taken place with regard to the best size for a colony when put into winter quarters. In my estimation, six Langstroth frames, well covered with bees, answer as well as eight or ten, particularly if in a chaff hive; they will be found as strong in the spring usually as the larger ones. I would myself prefer four or five frames crowded with bees, with a young laying queen, to twice as many with a two-year old queen—the results on the first of April next year would be much more satisfactory. On the final examination, before putting the bees away for winter, I prefer to take away, if necessary, some frames of their fall-gathered honey and pollen, and introduce into the middle of the hive two frames of empty worker comb; then feed the bees liberally pure sugar syrup (made of coffee A sugar and water), until those frames are filled and sealed over.

The bees will come out cleaner, brighter and more healthy in spring on sugar syrup than on any fall honey they may gather. The frames removed should be kept in a warm, dry room until spring, and then be fed back to them for brood-rearing, after the bees are able to fly and void their feces. Pollen consumed in winter is now acknowledged to be the main cause of dysentery, and by removing the frames filled or partially filled with pollen, and substituting pure sugar syrup, the bees can live for months without any necessity of leaving their hives, and come out in spring clean, bright and healthy.

The Northwestern Convention.—Mrs. L. Harrison, in the *Prairie Farmer*, remarks thus on the late bee-meeting in Chicago:

The third annual reunion of the Northwestern Bee-Keepers' Society, held in Chicago, Oct. 18 and 19th, has just closed. This society convenes yearly, during the last week of the Inter-State Exposition, so that cheap fares are obtainable on the roads leading hither. At its initial meeting three years ago, it was a tiny plant, but under the fostering care of Thomas G. Newman, Esq., it now spreads its wings over seven states of the great Northwest. Over one hundred able representatives from these states were in attendance at the recent meeting. It is to be regretted that there are not more farmers and bee-keepers in a small way, to partake of the rich repast that is spread at these reunions. The whole ground of bee-culture was plowed, sub-soiled, harrowed and afterwards brushed in with clippings of the hedge, by intelligent and practical apiarists during the sessions of the society. The deliberations of this society show that bee-keeping is no mean pursuit, and by its culture the Northwest may rival, if not surpass, the sunny South in the production of sweets.

Crop Reports for 1882.

The following crop reports of both bees and honey, were sent to the North American Bee-Keepers' Society, and read at its late meeting in Cincinnati, O. They were kindly sent to us by the Secretary, Mr. Root, and will appear simultaneously in the *BEE JOURNAL* and *Gleanings in Bee Culture* to-day. These reports are quite full and interesting and cover eight States. The first is from

GEORGIA.

From an extensive correspondence with all parts of the State, I place the honey crop, the present season, at an average of about 26 lbs. to the colony. In some sections it has been unusually fine, while in others no surplus has been taken. The greatest yield reported from a single colony was 350 lbs. extracted honey.

The most of my correspondents reported the greatest yield when the atmosphere was moderately dry, while a few reported the largest flow when the atmosphere was "decidedly humid." Summing up these reports, we find that an atmosphere neither dry nor wet, but moderately cool and moist, is the most favorable for a flow of honey.

Our honey is mostly of a dark amber color, though the flavor is good. This year the quality was above an average.

Geographically considered, Georgia possesses a greater variety of climate and soil than any other State in the Union, and consequently a greater variety of forage. Cultivated forage plants, including clover and buckwheat, grow well in the northern parts of the State; while in most of the middle region and southern part, the honey sources are confined to the native flora of the forests and fields.

The majority of bees are kept in the old box hive, or gum; but movable-frame hives are being rapidly introduced, as well as the improved races of bees.

J. P. H. BROWN.

Augusta, Ga.

IOWA.

About a month ago I issued a call through some of the bee papers, asking individual bee-keepers in the State to send me reports as to the status of our industry in their several sections. In response, I have received twenty reports from seventeen different counties—about one-sixth of the whole number of counties in the State. Of course, I cannot make an accurate report from such meager materials.

In my own section of the State, the northeastern, bees went into winter quarters last fall in excellent condition. The winter was short, open, and mild, and, as a general thing, the 1st of April found bees nearly all alive and in excellent condition, no matter by what mode wintered. From that time until the middle of summer, we find the worst kind of weather for bees, it being cold, windy, and cloudy

nearly all the time, preventing bees from gathering much pollen or honey, or rearing much brood. As a consequence they were in poorer condition on the first of June than on the 1st of April, with quite a large number of colonies entirely dead, some reports estimate the loss during these two months at 25 per cent. I do not think, however, that the loss over the entire State will average so large as that, although it was very serious. It would have been much larger but for feeding having been very generally resorted to.

White clover was nearly two weeks later in commencing to bloom than ordinary, but yielded honey from the first: that is, whenever the weather allowed bees to gather it, which was but little more than one day in four, until the middle of July, when we had about twelve days of good weather, and as heavy a flow of honey from both white clover and basswood as I ever saw. Bad weather caused another interval of several days, followed by a heavy run for two weeks from buckwheat, and a light run the rest of the season.

I judge that the season over the State at large has been very similar to what we have had in our section, except that the central and southern parts of the State had less bad weather to contend with, and consequently a steadier flow and much larger crop of honey; in fact, the largest crop gathered for years. Of course, it is impossible to estimate the average yield per colony over the State, but I am satisfied that those who practice improved bee-culture have obtained not less than 75 lbs. per colony. The slow but steady yield of honey during the earlier part of the season caused a larger amount of brood-rearing than common, which resulted in excessive swarming. Nearly all the reports speak of this fact.

The reports quite generally indicate an increasing interest in our modern methods of bee-keeping, also that bees are in excellent condition for winter.

All things considered, the season of 1882 has been a prosperous one to a large majority of bee-keepers in Iowa. Those in the northern part of the State have had a full average season, while those in the other parts have had a much more than average yield. As the flow of beer and whisky has this year lessened in our State, that of honey has largely increased.

O. O. POPPLETON.

Williamstown, Iowa.

CALIFORNIA.

I hereby send you my report for this State, as far as I have been able to make it out.

In Los Angeles county 39 bee-keepers report 4,220 colonies, but say nothing about honey.

In Ventura county, 160 apiarists, with 7,500 colonies of bees, report 220,000 lbs. of extracted honey, and 2,000 lbs. of wax.

In Kern county 3 apiaries, report 400 colonies, but no honey.

In Alameda county, 1,500 colonies are reported with a crop of 75,000 lbs.

In Inyo county 46 bee-keepers, with 865 colonies, report 23,450 lbs. of comb honey, 6,000 lbs. of extracted, and 2,750 lbs. of strained, and 100 lbs. of wax.

In Napa county 6 bee-keepers reported 50 colonies of Italians, 50 hybrids and 150 blacks; 100 lbs. of wax, and 350 lbs. of comb honey, 2,000 lbs. of extracted and 3,350 lbs. of strained.

Owing to unfavorable atmospheric conditions in the spring, and in some localities to a total lack of rain during last winter, the flowers throughout the State have failed to yield an average amount of honey this year. In the southern counties, which is the principal honey-producing part of the State, the season is regarded as nearly a complete failure, but few bee-keepers securing part of a crop. Mr. E. Gallup writes me that the amount of honey is all guesswork. Others positively refuse to give any estimate of the honey crop. Owing to the failure, many bee-keepers are discouraged, and seem to take no interest in the matter; wherefore I find it difficult to make out any report, which will be at all satisfactory. Several bee-keeping counties have not yet been heard from. Some place the average of honey per colony at 25 lbs. others at 40 lbs. It is impossible to form any correct idea of the true amount. But few give the quantity of wax produced; it will probably all be made into foundation. Much of the honey reported as "comb" is produced in large boxes or even whole upper stories, without any idea or means of placing it on the market in a salable shape. Foul brood is reported very prevalent in some parts of the State, but I have no statistics in that regard. In this, Inyo county, there is no trace of it, as far as I have been able to ascertain.

W. MUTH-RASMUSSEN.

Independence, Cal.

CONNECTICUT.

The fall forage for 1881 was not quite up to that of 1880. A great many colonies went into winter-quarters with light stores, though strong in bees. The latter part of September was very pleasant. The month of October, bees flew about half the time. During November, bees were very quiet, unless in sheltered places, until the 29th and 30th, when they flew almost as in summer, to be again shut in until December 20. Those in sheltered localities flew enough to keep them healthy, when there was another general shut-in until March 2d, when there was a general fly, and again on the 5th, but not so strong. On the 23d there was a good flying-out, and no more generally good weather till the last week in May, though in extra sheltered places bees came out a little.

Apple bloom was only patchy, and more the exception than the rule. Raspberries were fair, and worked on considerably.

In the northwest part of the State I found a variety of willow that is new to me (the spikes are a canary yellow, about 2 inches long, sometimes longer) that holds its bloom from two to three weeks. The wood is very brittle.

The flowers possess only stamens; the cup of the flower contains a drop of honey, as large as a medium-size pin-head, light amber color the consistency of basswood, and of good flavor. I consider it as good as goldenrod, if not better. The bees work steadily on it, and are very good natured, even hybrids being quite docile. One good colony of bees having 7 combs were given three more empty combs, and they filled and capped them in one week. The same colony boxed about 20 lbs. besides, of clear willow honey. It was the only colony tried, but all the others in the same locality did equally well, considering their chance. I have been through over one-half of the State, and I never saw but few of the same kind of willows, and then but solitary bushes always covered with bees.

White clover showed itself in favorable patches June 7, and was in general bloom by the 15th; but the general lightness of the colonies, caused by the late spring, made but little surplus honey from white clover.

Basswood was a medium bloom in a few places, though the majority of the trees did not show a single flower.

Sumac bloomed uncommonly heavy, and the flowers were dripping with honey, but of short duration, caused by the drought.

Buckwheat was a failure, as a rule, though exceptional pieces on wet land yielded honey abundantly.

The early fall forage plants being dried up, there has been but little honey gathered since sumac; but the past three weeks of showers have made vegetation again look green, which, with some warm weather, may give us an ample late supply for winter. Brood in the hives is a scarcity, and colonies are generally quite weak.

At the New Milford Agricultural Fair, Sept. 30, through the untiring efforts of Mr. Wm. L. Burgess, of West Morris, Conn., the nucleus of a State bee-keepers' society was formed, with Mr. Burgess the elected President. He is very enthusiastic and energetic in the cause.

If I remember rightly, at the last annual meeting of North American Bee-Keepers' Society, a resolution was passed to make the Presidents of the State societies the vice-presidents of the National Society; therefore, before I vacate to my worthy successor, I would offer as a resolution, that the National Society request all the editors of the several bee papers to send a list of their subscribers to the vice-presidents of the different States, thereby placing the vice-president in possession of a means of obtaining a general and more correct knowledge of the exact apiarian condition of his State, making his report more valuable and informative.

As nearly as I have been able to ascertain, Connecticut contains about 80,000 colonies of bees, of which 95 per cent. are still kept in box hives, half-barrels, nail-kegs, and the like patent devices of the foggy style.

Of the number of colonies heard of, not over two-thirds will have a supply of stores sufficient for wintering.

Woodbury, Ct. H. L. JEFFREY.

MISSOURI.

There are but few bee-keepers' conventions in this State, consequently I am unable to give definite and certain statistical information of the productions of honey for 1882.

I know that there has been a great increase in the number engaged in the industry in Missouri in the past two years. There is more honey in the market in the cities and country towns this fall than ever was offered before. It is in better condition and of a better quality; most of the honey offered for sale is in one and two lb. prize boxes.

The "St. Joseph Inter-State Exposition" for the last two years has offered very liberal premiums in the Apian Department, and the premium list was a varied one, covering every branch of the apian business.

The past season the display in this department was limited, but very creditable. It was the center of attraction, especially to the farmer. They learned the "new way," and where improved apian supplies can be bought. The consumer, groceryman, and producer, who were in attendance here, for the first time saw taste, order, and neatness displayed in the productions of the apiary, and preparing honey for the market; also an order and system in the handling and management of bees.

People were in attendance on the Exposition in the fall of 1881 from all the counties in Northwest Missouri. They returned home with new ideas on "bee and honey culture." Quite a number of the country papers made special mention of the display in the Apian Department.

Hon. Thomas G. Newman, editor of the AMERICAN BEE JOURNAL, attended the Exposition in September, 1881, and delivered an interesting lecture on "Bees and Honey" one evening, to a large and appreciative audience. The daily papers reported his instructive lecture in full, and in addition made very favorable comments. I feel safe in saying that seven-tenths of the people of Missouri have read more or less on this subject and the profits of the apiary, since the fall of 1881. The circulation of the bee papers has increased in the meantime.

The display in the Apian Department of the St. Joseph Inter-State Exposition this fall was the largest and best ever seen at a State or county fair or Exposition in the United States. There were over 3,000 lbs. of comb and extracted honey on exhibition; also Cyprian, Albino, Italian and black bees, and almost every tool and implement used in the apiary.

The increased number of exhibitors and the increased quantity and quality of honey on exhibition this year, warrants me in saying that the interest awakened in this industry in the last two years has been greater than the most enthusiastic could have expected. Most of the county fairs made an Apian Department for the first time.

From the above statements you will see that Missouri is on the right road to take a prominent position in this

industry. In 1870, according to the census of the general government, she ranked fifth in the production of honey. I have been unable to procure the reports for 1880. I predict that in 1890 Missouri will rank first in the production of honey. Nature has smiled upon this territory; she has made the groundwork for a land which will flow with "milk and honey." On account of its diversified climate, soil, foliage, wild and cultivated flowers, etc., and its abundant and never-failing streams of water, some portion of the State will have an abundant crop of honey each year.

The honey on exhibition this year at our various fairs was white-clover, basswood, buckwheat, honey-locust, goldenrod, etc. Quite a quantity of honey on exhibition this fall was flavored with heliotrope and mignonette. It was of such a superior flavor to any produced in this State heretofore, that bee-masters hereafter will ornament their yards and gardens with these beautiful and useful plants, for the purpose of giving the bees something to flavor honey with.

I deemed it useless to attempt to organize bee associations this year. Until you practically demonstrate to the producer, as a general rule, the practicability of our enterprise, and that there is not only pleasure but also profit in it, you have an up-hill undertaking to encounter. I concluded that the best plan was to have the various county fair associations make an apian department, and offer liberal premiums; then to furnish the local papers with articles or ideas on the subject, to be prepared and published. By this means, every farmer in the several counties is prepared to learn something when he visits that department at the several fairs, and converses with those engaged in the industry, who are in attendance. The producer in each county can see the improved beehives, and apian tools and implements, and he learns the improved manner of preparing honey for market. Furnish the idea and evidence of the results, and let him draw his own conclusion, and he will go home with the consciousness that he knows more than the professional bee-master, and with the resolution that he will furnish evidence of that conclusion next season. The most conclusive idea to present is, that in an ordinary season each farmer can pay his State and county taxes from the profits of a few colonies of bees, and have something left for spending money for the "old woman and the girls." I would suggest that you, by resolution, indicate the best plan for vice-presidents to adopt in their respective States to further the work.

From my experience and observation, I would suggest that each vice-president give his special attention to the local fair in his county; make the apian department attractive and instructive. If it is a success, the papers will mention it with favor. Other papers will copy the articles, and advise their readers to do likewise. By this way you furnish ideas, and the evidence that there is profit

and pleasure in the industry; and you have one less difficulty (which is the greatest one) to overcome; that is, the idea that you have some patent right to sell. Furnish the idea and evidence generally, and that there is pleasure and profit in the investment, and the producer will, in a short time, buy the improved bees, hives, and apian implements, and will be compelled to organize local bee conventions.

If this plan, or some one similar, could be adopted, in five years the honey crop of the United States would be enormous.

In behalf of the friends of "Improved Bee Culture" in Missouri, I must extend thanks to the Hon. Thomas G. Newman, of Chicago, Ill., for the good send-off he gave the honey and bee interest in Missouri, in September, 1881. By his coming here and delivering his lecture on "Bees and Honey," he gave character to the enterprise and stability to the industry.

Those who profited by his lecture and bought a few colonies of bees, were again benefited by a distinguished bee-master from Illinois, Mr. Elvin Armstrong, of Jerseyville. He made one of the neatest displays of comb and extracted honey ever seen in the West. He showed producers how to prepare comb honey for market, and how to put extracted honey in good marketable shape, in glass jars and bottles neatly labeled. These ideas were practical, and are invaluable to our people. He was awarded the \$25.00 sweepstake premium for the best display of honey; also \$15.00 for the best display of extracted honey. He had his "Crown bee-hive" on exhibition. It was the first time many of our farmers had seen a frame hive with surplus honey. Mr. Armstrong took great pains in explaining to visitors the advantages of frame hives over the old-style "gum." He was awarded the special premium, \$10.00, for the best bee-hive.

Missourians engaged in bee culture invite every person engaged in the same industry to come and contest for our liberal premiums offered by fair associations. Bring in ideas, and take the money premiums. Therefore, Mr. President, you see we Missourians are not only just, but we are generous.

St. Joseph, Mo. R. S. MUSSER.

DAKOTA.

Number of colonies in the fall, 267; in spring, 260; lost in spring, 5; colonies sold, 40; number of colonies now, 420; comb honey, 9,381 lbs.; extracted honey, 1,601 lbs.; total honey crop, 10,982 lbs. Eighty per cent. were in movable-frame hives, and twenty per cent. in box hives and log gums. Ten per cent. of increase was obtained by division, and 90 per cent. by natural swarming. The crop, as compared with last year, is one-half.

The above report is compiled from tabulated reports received by me from 22 bee-keepers—about one-half the number that are in the Territory.

The fore part of the season up to July 10, was very wet and cool; so much so that bees had to be fed, being

unable to obtain enough to subsist on; from July 10 to Aug. 15, the honey-flow was good; after the 15th of Aug. the weather was so dry the bees did but little; so on the whole there will be only one-half the honey here this year that we ought to have had.

W. M. VINSON.

Elk Point, Dakota.

MAINE.

COUNTY.	Colonies of Bees in the Fall of 1881.	Colonies died in the winter and spring of 1881-2.	Colonies at the beginning of the season of 1882.	Increase during 1882, by dividing.	Colonies of bees at the close of 1882.	Pounds of Comb Honey produced.	Pounds of Extracted Honey produced.
Aroostook.....	2500	1250	1250	1750	3000	20,000	1000
Androscoggin.....	1000	400	400	400	800	3,000	1000
Penobscot.....	2000	1250	750	1250	2000	4,000	800
Waldo.....	1000	300	700	700	1400	12,000	1200
Somerset.....	1000	300	500	600	1100	3,000	1000
Franklin.....	1000	300	700	100	800	5,000	500
Oxford.....	1200	500	700	800	1300	5,000	500
Cumberland.....	500	150	400	400	800		
Sagadahoc.....	300	50	250	125	375	500	150

Nine of the best counties give over 10,000 colonies at the beginning of winter, 1881, of which more than 30 per cent. died during the winter from starving, freezing, smothering and various other causes too numerous to mention. Nine-tenths were in box hives, and about the same proportion were black bees; the rest were in improved hives of various designs, mostly with movable-frames, of all sizes, from 7x9 to 9x18.

Nearly all the box hives are arranged to receive sections for surplus over the brood-nest. This is especially the case in Aroostook county, where the colonies number nearly 3,000, and produce 20,000 lbs. of box honey at 20 cents per pound. These are all black bees in box hives, and nearly every one wintered in cellars or special receptacles.

In Penobscot and other eastern counties, there are a few Italians; also in Kennebec, which is a good county for bees. Many of the bee-keepers bought quite freely out of the State, thus increasing their stock, and these were nearly all Italians in movable-frame hives.

About one-half of the bees in the State are wintered on their summer stands, with slight protection. There are, so far as I could ascertain, but few chaff hives. Most of those dying which were wintered in cellars or warm rooms, die from spring dwindling, caused, as many think, by the sudden and severe changes of temperature to which they are subjected. The winter of 1881 was a hard one; the spring of 1882 was late, cold, and changeable. Bees came through very weak; many had to be fed, or died before they could gather any honey. Along the northern and northeastern counties, the midsummer harvest was quite good; but along the sea shore and southwest portion of the State the drouth was too severe for any honey. The fall harvest from goldenrod and other fall flowers was excellent, and I think nearly all will have sufficient winter stores. But the rate of in-

crease, which is almost entirely by natural swarming, is low, many bee-keepers not having a single swarm come off; and the amount of surplus honey is ridiculously small—far below our usual average. Maine is not a bad State for bees; what we want is more improved methods in handling them and their products. I think almost the whole country, or the northern part of it at least, needs a universal frame, so that it may be changed easily from hive to hive and man to man the country over; then we must solve the winter problem, so that our bees will all live through and come out in the spring strong and healthy, and then we shall be able to gather up some of the best of all sweet things, which are now wasted on the desert air. J. A. MORTON.

Bethel, Maine.

WISCONSIN.

According to a request of the President, I respectfully submit my meager report from this State. To a notice published in the BEE JOURNAL to the bee-keepers in this State, only a small percentage responded, and sent me an abbreviated report of the result of the season's operations. The reports I received are from 25 bee-keepers living in different parts of the State, with a return of 3,025 colonies they commenced with May 1, 1882. According to said reports, the average yield per colony I find to be 60 lbs. of surplus, or 181,500 lbs. from all. The honey is of most excellent quality.

The increase reported amounts to over 80 per cent. (two-thirds by natural swarming). The weather of the whole season was exceptionally cold, wet, and windy. The fall is favorable, although cold.

We had a profusion of white clover bloom, but only a moderate yield of honey, owing to the unfavorable weather. A great part of the basswood yield was lost by rain on 6 successive days. The fall yield did not amount to any thing; they hardly got enough to keep up brood-rearing.

According to my own, and from the reports I have received, I estimate the crop of this season to be about two-thirds in Wisconsin. There are in this State about 50,000 colonies of bees; but my report is from only 3,025—a little over one-sixteenth of the whole. If the 3,025 colonies that are reported are a fair average of the whole, then the crop of Wisconsin honey for 1882 amounts to 3,000,000 lbs.; it will bring the net sum of \$450,000.

The above figures will show that the industry of bee-keeping is of sufficient magnitude to be supported by the government.

C. GRIMM.

Jefferson, Wis.

Emerson Binders—made especially for the BEE JOURNAL, are lettered in gold on the back, and make a very convenient way of preserving the BEE JOURNAL as fast as received. They will be sent, post-paid, for 75 cents, for the Weekly; or for the Monthly, 50 cents. They cannot be sent by mail to Canada.

CORRESPONDENCE

For the American Bee Journal.

Bee and Honey Report for 1882.

G. M. DOOLITTLE.

By referring to back numbers of the BEE JOURNAL, the reader will see how my 80 colonies of bees came through the winter in good condition, but, owing to the cold weather the last half of April, they were quite reduced in population, although no colonies were lost. As April 30th was a pleasant day, all had a fine fly, and a little pollen was brought in for the first time. With May 2d it became cold, and snow and frost prevailed till the 12th, when we had a few warm days. Apple blossoms were late, not opening till about June 5th; and owing to cold winds, clouds, and rain, no honey was secured from them except a little on June 8th. Owing to the cold spring, the bees had reared but little brood previous to this, hence, a good supply of honey still remained in the hives to carry them through till white clover.

About the middle of April I sold all my bees, except forty-five colonies on account of the continued sickness of my father, which brought an extra amount of care upon me, so that I feared I could not properly handle a larger number of colonies. Of these 30 were set apart for the production of honey, and the remaining 15 devoted to queen rearing. White clover, although quite abundant, yielded no honey, and July 6 found the honey in my hives all equalized and so reduced that each colony had but little more than enough to last 4 or 5 days. But fortunately the cold weather caused the wild mustard, which is plenty in the fields of grain hereabout, to secrete a little honey, so that July 8th bees obtained a living, and from the 12th to the 20th, a small gain was made in the nearly destitute brood-chamber. July 26 found the basswood open, and as the weather was just right for the secretion of nectar, and my bees, being in readiness for a flow of honey, splendid work was done during the five days yield which followed. Then came two days of closing up, and the shortest season for honey I have ever known was at an end. Although a large acreage of buckwheat was sown, and the bees hummed merrily over the sea of white blossoms, still not a cell of dark honey was to be seen in the sections. As this is the fifth year buckwheat has failed to produce honey, it is hardly worthy the name of "honey plant," in this locality.

My bees have been increased to 80 colonies in good condition for winter. As a result from the 30 colonies set apart for honey, I have obtained 1,089 lbs. of comb honey and 441 lbs. of extracted, giving a total of 1,530 lbs., or an average yield of 51 lbs. per colony, which is the lightest crop I have received for the past 10 years, except in

1876, when the yield was 50 lbs. I also took about 500 lbs. in nicely sealed frames, but as I have used that to prepare my united nuclei for winter, I shall not bring it into the average yield.

From the 15 colonies set apart for queen rearing, I have sent out 197 queens. My section honey was sold at 17c. per pound and extracted 10c., delivered on board the cars here.

After footing up the total sales from my bees, and deducting all expenses therefrom, except my own work, I find I have \$822. As I have the same number that I had one year ago, this gives me the above amount clear, except my work, for one of the poorest seasons known in this State. As a decade of years has now passed since I have kept a close account with my bees, perhaps it may be interesting to your readers to know how such report stands; for it is only by a number of years' experience, in any business, that a true result can be obtained. A report of a very prosperous year, is often misleading, but one extending through a period of 10 years, should approximate very nearly to what might be expected for the same length of time to come. My average yield for each colony in the spring of 1873, was 80 lbs.; 1874, about 100 lbs.; 1875, a little over 106 lbs.; 1876, 50 lbs.; 1877, a fraction of a pound, less than 167 lbs.; 1878, 71 lbs.; 1879, 58 lbs.; 1880, a little less than 62 lbs.; 1881, nearly 135 lbs.; and in 1882, the present year, it was 51 lbs.; making an average yield each year, for the past 10 years, of 88 lbs. per colony, five-sixths of which has been comb honey. The average price at which it has been sold, is about 20c. for comb honey, the highest price 28½c. being obtained in 1874, and the lowest 10½c. in 1878. Thus the 88 lbs. at 20c. per pound gives \$17.60 average cash yield for each colony. Hence, if a man is capable of keeping 50 colonies, his income would be \$880 a year; if 100, it would be \$1,760. After an experience of 14 years in the bee business, I can see no reason why it does not compare favorably with any other pursuit in life, as far as dollars and cents are concerned, and when I look at it as a fascinating and health-giving pursuit, it places most other avocations in the shade.

Borodino, N. Y., Oct. 17, 1882.

For the American Bee Journal.

Bees and Honey Shows at Fairs.

S. HANSON.

Hagerstown, a picturesque, thriving town situated at the head of the Cumberland Valley, has been the scene of considerable excitement, occasioned by the Agricultural Fair; and the second meeting of the Union Bee-Keepers' Convention. The exhibits at the fair were unusually large and fine, and the number of visitors in excess of any previous year. As your readers are most interested in bee matters, we will omit a description of mammoth pumpkins, etc., and devote our time to a description of apian exhibits.

Mrs. L. Valentine had on exhibition, at the main hall, several fine specimens of honey in the comb; also, specimens of comb foundation.

Dr. Herman also showed several pounds of choice comb honey; both exhibitors receiving premiums.

The largest and most extensive, however, was that of "Sunnyside Apiary," Baltimore, Md., C. H. Lake, manager, and deserves especial mention. Mr. L. made his exhibit in a large tent, profusely decorated with flags, while the word "Apiary," in large letters, stretched upon the side, caught the eye of the visitors as they entered the fair grounds. Tables were constructed around the sides of the tent, laden with every conceivable appliance required in a first-class apiary. A magnificent display of bees, in variety, were shown in glass hives of unique construction, finished in ebony and maple, where every movement of the bees could be seen—the queens depositing their eggs, brood hatching, bees nursing, queen cells in all stages of development, etc.

Among the different varieties we noticed the new Holy Land or Syrian bee, the Cyprian and the Bellazona, claimed by the gentleman in charge to be the largest bee known in America. Also imported Italians, producing the so-called Albinos; Holy Land hybrids, also producing the same bee; Golden Italians and improved American strains of Italian and other bees.

A full colony of the most docile of any bees that ever came under my notice was that of a daughter of an imported queen of this season, were handled in public, without smoke or protection of any kind, and all the bees flying as if in their own home, upon our first visit to the tent. Later, we found them all confined, owing to the annoyance they gave the proprietors of the confectionery stands.

In the center of the tent, upon a raised base, was a pyramid of 220 lbs. of comb honey—the production of one colony of bees in about six weeks. This was shown in a case, constructed with full glass sides and erected with great taste. Upon the top stood a counter boy and shipping crate combined, filled with the most luscious nectar. The whole was crowned with a French glass shade, containing 18 sections of 11½ lbs. each, of the choicest and clearest honey ever seen in these parts, perfect in every particular and white as snow. On either side of the case was a photographic view of the apiary—the hives in full working order, showing the honey in the hives.

We noticed, in a conspicuous place, a photograph of an old friend and pioneer in bee culture, Richard Colvin. Among the hives we saw the "Old Reliable," an air chamber hive, said to winter and summer the bee satisfactorily.

Among the new features were the Automatic self-spacing frame of tin or wood, that causes the frames always to fall into position upon the rabbet, and cannot be glued together by the bees.

The "Boss" feeder, on the principle of "Root's" Tea-kettle feeder, deserves attention. A grass-knife for

cutting around the hives and adjustable to any bevel, were also noticed as being shown at this fair for the first time.

We came away, highly pleased with our visit and with the information gained through the popular manager of Sunnyside Apiary, who deserves much credit for his zeal and energy in the cause of bee culture and the courteous attention given to the many visitors who examined that fine display. Philadelphia, Pa., Oct. 21, 1882.

Norwalk Chronicle.

Spring Management of Bees.

H. R. BOARDMAN.

The queen stops laying at the approach of cold weather, thus leaving the hive destitute of brood during the winter, but resumes her duties on the approach of spring. Usually brood rearing commences some time in February in the bee house or cellar, either later or earlier, according to the condition of temperature, and somewhat later on the summer stand. As the life of a bee is very short only a few weeks at most in the summer when in full activity, and as many months of the winter the occupants of the hive at the close of the winter are aged and infirm and their lease of life necessarily short, if no brood were raised to supply the places of the rapidly diminishing numbers of old bees at this season the hive would soon be depleted of its numbers. Colonies that are queenless may winter very well but they are very soon all gone when the warm weather of spring calls them into active life. The dying out of the old bees thus rapidly at this season when not accompanied by a corresponding increase from the hatching brood causes that much feared and much talked of casualty, spring dwindling.

Therefore, it is important that the bee-keeper see to it that the brood is hatching, to bridge over this important and critical period in the history of the colony.

It is a disputed point even among very practical bee-keepers as to how early brood rearing should be encouraged; but I think there need be no doubt about the economy of continuing it uninterrupted when once begun.

After brood rearing has continued for a time in winter quarters it will cease entirely for want of water, and colonies will suffer from thirst. The higher the temperature the greater the suffering. They may be supplied to a limited extent with drink, provided the temperature is high enough (not under 50), or, they may be set outside if the weather will permit and take the chances of sudden changes of cold and winter blizzards which is very demoralizing to colonies that have been wintered in a warm bee house. The prudent and thoughtful bee-keeper will often find himself in a dilemma at this point not easy to decide. Pollen is also necessary to carry on brood rearing to any considerable extent. If bees are out before

natural pollen appears and the weather will permit, pollen may be supplied by a substitute of flour which will take the place of natural pollen.

Before the time comes in the spring to set the bees out permanently some attention should be given to the preparation of the yard. All rubbish, the harbor of the bee moth and its progeny, should be removed; the yard made level and smooth, the shrubbery trimmed, and everything possible done for the pleasure and convenience of the summer work and last, but not least, every stand leveled with a spirit level, for if this be omitted the combs in the hives will hang to one side and be built irregular. When all is ready the bees should be carried out on a warm day and each hive set upon its own stand from where it was taken.

Examination of all colonies should be attended to without delay on the first warm days after they have had a thorough flight, to determine: 1st. The amount of stores. 2d. The quantity of bees. 3d. If supplied with a good queen. This may be done by raising the hive and looking in at the bottom of a bottomless hive or box hive, thus determining at one operation the amount of stores and bees, or by removing the cover of the hive, if it has a fixed bottom. For more minute examination the hive must be opened, if movable-frame hive. If box hives are used they may be examined on cool mornings by raising the hive and examining the bottom board for immature young bees and larvæ, which determines as nearly as we can the presence of a queen. I would advise that all such colonies be transferred to movable-frame hives and queenless ones should be carefully marked, and particular attention given them at the first favorable opportunity, when the weather will admit.

Although these light and queenless colonies are really worth little, they will be a source of much trouble and annoyance if not looked after, by inducing robbing, which may result in a general demoralization of the whole apiary.

Weak colonies may be very much assisted by aid of the division board, by which we may contract the hive so as to confine the bees upon such a number of combs as they will be able to cover, and by placing the stores upon the other side of the board they are made accessible to the bees and constitute a perpetual feeder.

By use of the division-board too, we may unite such colonies as we wish to unite by placing the colony containing a queen on one side of the board, and carefully cover with a cloth or quilt, and the other colony deprived of its queen on the other side, leave them thus for several days when the board may be removed and the brood packed together as compactly as possible and the work is done. All queenless colonies before mentioned should be disposed of in this manner. I have practised this mode of uniting bees almost entirely for several years with the most perfect success.

If this work has been neglected and our bees are found robbing, the en-

trances of all hives should be closed, so that but one or two bees can pass at a time and if no disposition is shown to defend themselves the hives should be closed or removed to a room or bee house. If the hive is closed and the weather is warm and the colony of considerable strength, some caution should be exercised about their becoming heated and even melted down. If after carrying in, for a day or two, no disposition can be encouraged to defend their stores the sooner they are united with a colony of more spirit the better.

I have only to say in my opinion if bees have been properly wintered and judiciously managed during the spring there will be no such thing as spring dwindling.

There is neither excuse, nor profit, in having strong and weak colonies in the same apiary. The light should be encouraged by feed and strengthened by brood from the strong. A comb of brood just hatching from a strong colony placed in a weak one will give it an astonishing impetus, and in the place where the brood was removed from, the strong colony is supplied with a nice empty comb or foundation which will be filled with eggs, and the work of the hive go on without interruption. In this way the whole apiary may be built-up into uniform strength and when the harvest comes the result will be a uniform yield of honey.

The amount of honey, and consequently the amount of profit, depends entirely upon the force of workers we have ready when the harvest comes. If we feed when natural stores fail, and thus keep brood rearing steadily going on, the hives will be full of industrious workers when the harvest comes, our brightest dreams of a sweet harvest will be realized, and our bank balance will be a substantial encouragement of judicious management.

East Townsend, O.

For the American Bee Journal.

Purity of the Atmosphere.

S. CORNEIL.

To assist Mr. E. Moore in his investigations as to the purity of the air surrounding his hives permit me to make the following quotations:

"All gases of different densities which are not disposed to unite chemically with one another have a strong tendency to mutual admixture. Thus, if a vessel be partly filled with hydrogen and partly with carbonic acid the latter, which is twenty-two times heavier than the former, will not remain at the bottom but the two gases will in a short time be found to have uniformly and equably mixed. And it is on this principle that the constitution of the atmosphere is every where the same, although the gases which compose it are of different specific gravities."—*Carpenter's Principles of Comparative Physiology*, page 295.

"It (diffusion) is of the greatest importance in terrestrial physics being the cause of the uniform composition

of the atmosphere at all elevations and one of the causes of the speedy dissipation of noxious gases and vapors in the open air."—*Chambers' Encyclopedia, subject, Diffusion.*

"There is a very remarkable property enjoyed by gases and vapors in general which is seen in a high degree of intensity in the case of hydrogen; this is what is called *diffusive power*. . . . It is impossible to overestimate the importance in the great economy of nature of this very curious law affecting the constitutions of gaseous bodies; it is the principal means by which the atmosphere is preserved in an uniform state and the accumulation of poisonous gases and exhalations in towns and other confined localities prevented."—*Fowne's Chemistry for Students, page 112.*

As Mr. Moore refers to some statements of mine made at the Toronto Convention, allow me to take this opportunity of saying that, in condensing the report, my remarks on that occasion have been very much mangled. For instance, I did not say that it required bacteria to produce dysentery, but that if there were any bacteria, the dampness and consequent fermentation in the hive, were the causes. There are other misrepresentations, but it is hardly worth while now to correct them. I wish to say, however, that in regard to the purity of the air in rooms I am correctly reported.

Lindsay, Ont., Oct. 16, 1882.

Translated from *Bienenvater*.

Gleanings from Germany.

A. R. KOHNKE.

In a village near Zempelberg, the tavern keeper was attacked by rowdies, who began to demolish his furniture, threatening also to abuse him and his family. To save himself he ran out into the garden, picked up one of his colonies of bees and threw it through the window among the drunken crowd; the bees, enraged, went for them with a will, and cleared the house and premises in less than two minutes.

SPIRÆA ULMARIA.—The blossoms of *Spiræa Ulmaria* contain, as a natural product, salicylic acid. The plant is a native of Germany, where it grows in low, wet places and blooms from June till August; it attains a height of from three to six feet, and furnishes honey and pollen; in gathering which, the bees also gather the disinfectant. Cases of malignant foul brood having disappeared without the aid of the bee-keeper, it was discovered that it was due to the profuse bloom of this shrub. Thus, it appears, that nature has provided means to check and cure this dreaded pest among bees.

KNOWLEDGE OF BEES.—Reaumer remarks, that whenever he attempts to go near his bees in full state dress, they will sting badly, but when in his old dressing gown, will not molest him. [It is rather curious, but a fact, that my bees will not permit me to

handle them in my fine suit, unless I give them a severe smoking, whilst in my every day clothes I can usually go about them without smoke, though both are of the same color.—*Translator.*]

OBSOLETE MEANS TO PROMOTE BEE-KEEPING.—One hundred years ago, in Prussia, prevailed a law that every farmer, being in possession of a certain number of acres, had to keep at least four colonies of bees; those having about half the number of acres, two, and those having a garden only, one colony. In case of neglect, the occupier of the premises was fined.

TO TEST THE PURITY OF WAX.—1. Specific gravity. Pure wax, whether bleached or not, has a specific gravity of between 0.956 and 0.964, generally from 0.958 to 0.960. Adulterations with stearic acid, resin or japanian tree wax, makes it heavier; with those of paraffine or tallow, lighter.

2. Pure beeswax is dissolved by chloroform, on warming it; not so with adulterated wax.

RULES FOR BEGINNERS IN BEE-KEEPING.—1. Before you spend any money for bees or fixtures, seek the advice of an experienced bee-keeper, even if you have to travel many miles to obtain the same. What you profit, by good advice, will richly repay your traveling expenses.

2. Don't attempt to make your own hives, if you have nothing but a hand-saw; but buy them in the flat, of reliable manufacturers.

3. Buy only strong colonies, even if they cost a little more.

4. Use but one style or kind of hive in your apiary.

5. Keep your colonies strong; do not divide for increase too soon; rather buy strong colonies.

6. See to it that your colonies have all worker comb, which may be had by the use of worker comb foundation.

7. If some of your colonies have not winter stores enough, feed them plentifully. One pound above what they will need will do no harm; if but one ounce is lacking, they will starve and the colony will be lost.

8. During winter, but especially in early spring, keep the colonies warm, otherwise the rearing of brood will proceed slowly.

9. In spring, contract the brood-nest by a division board, and add more frames only when the bees cover well what frames they have. Do not add more than one frame at a time.

10. What you do not understand, learn of bee papers, or books, but especially of your bees. Exercise your powers of observation to gain practical experience, and you will be successful.

Vienna, Austria.

Sample Copies of the AMERICAN BEE JOURNAL will be sent free to any person. Any one intending to get up a club can have sample copies sent to the persons they desire to interview, by sending the names to this office.

CONVENTION

Local Convention Directory.

1882. Time and Place of Meeting.

Nov. 1—New Jersey & Eastern, at New Brunswick, J. Hasbrouck, Sec., Bound Brook, N. J.
3.—Iowa Central, at Winterset, Iowa, Henry Wallace, Sec.

1883.
Jan. 16.—Eastern N. Y., at Albany, N. Y.
E. Quakenbush, Sec., Barnerville, N. Y.
16-18, Northeastern, at Syracuse, N. Y.
G. W. House, Fayetteville, N. Y.

In order to have this table complete, Secretaries are requested to forward full particulars of time and place of future meetings.—ED.

The annual meeting of the Mahoning Valley Bee-keepers' Association will be held at Berlin Center, Mahoning County, in the town hall on Friday and Saturday the 19th and 20th of January, 1883. All bee-keepers are invited to attend and send essays, papers, implements, or any thing of interest to the fraternity. A full attendance is requested of all who are interested. In fact, the meetings will be so interesting that you cannot afford to miss them. We expect a lecturer from abroad on the evening of the 19th.

LEONIDAS CARSON, Pres.

The Iowa Central Bee-keepers' Association will hold its annual meeting at the office of Graham & Steel, Winterset, Iowa, on Friday Nov. 3, 1882, at 10 a. m. All interested in bee culture are invited.

HENRY WALLACE.

CLUBBING LIST.

We supply the *American Bee Journal* and any of the following periodicals, one year, at the prices quoted in the last column of figures. The first column gives the regular price of both. All postage is prepaid by the publishers.

	Publishers' Price.	Club
The Weekly Bee Journal,	\$2 00.	
and Gleanings in Bee-Culture (A. J. Root) 3 00..	2 75	
Bee-Keepers' Magazine (A. J. King) 3 00..	2 60	
Bee-Keepers' Exchange (Houk & Peet) 3 00..	2 30	
Bee-Keepers' Guide (A. G. Hill)	2 50..	2 35
Kansas Bee-Keeper	2 60..	2 40
The 6 above-named papers.	6 00..	5 50
The Weekly Bee Journal one year and		
Prof. Cook's Manual (bound in cloth) 3 25..	3 00	
Bees and Honey, (T. G. Newman) " 2 75..	2 50	
Binder for Weekly, 1881.	2 85..	2 75
Binder for Weekly for 1882	2 75..	2 50
The Monthly Bee Journal and any of the		
above, \$1 less than the figures in the last column.		

Bee Pasturage a Necessity.—We have just issued a new pamphlet giving our views on this important subject, with suggestions what to plant, and when and how. It is illustrated with 26 engravings, and will be sent postpaid to any address for 10 cents.

Renewals may be made at any time; but all papers are stopped at the expiration of the time paid for, unless requested to be continued.

SELECTIONS FROM OUR LETTER BOX

Winter Depository.—I began keeping bees with 9 colonies and now have 24, in Langstroth hives. I have taken 32 gallons of extracted honey and 400 lbs. of comb, and my bees are in splendid condition for winter. Some time ago I took off the upper stories and removed to the lower story some of the combs containing brood, I noticed a great many dead bees. What was the cause of this? The operation was performed during the warmest portion of the day. I feel certain of great success another season, if I can winter without loss. I am about to build a winter repository for my bees, and will give you my plan. Our soil is clay loam; I shall make an excavation 4 feet in depth, wall it with stone to the top, and above the surface build a hollow wall 4 feet high, making 8 feet in all, and filling in, with spent tan bark. The wall will be 8 inches thick, tightly clapboarded on the outside. I shall then have another wall lathed and plastered inside of this, leaving 2 inches space between; this wall will connect with the ceiling, but will leave a small aperture at the base and will have ventilation by pipes. Do you think this will cause a current of air, and keep the room free from moisture?

S. J. YOUNGMAN.

Cato, Mich., Oct. 5, 1882.

[The dead bees were probably those that had been worn out during the honey harvest and had died of old age. The winter depository you describe should winter bees well, everything else being equal.—ED.]

A Good Report from Canada.—That cloud with the silver lining hovered over my bee yard for about ten days in the beginning of August. We were ready. Our dish was "right side up," and we obtained 152 lbs. per colony, in ten days, of basswood honey, and increased over 100 per cent. With all of the good reports in the BEE JOURNAL, I have seen none as good for ten days. All our colonies are in good condition and ready for winter, when it comes.

R. L. MEADE.

Nassagaweya, Canada.

Iowa Honey Crop for 1882.—Our honey season, and time for queen rearing has come to an end for the year 1882! It has been one which in Iowa was rich in the yield of honey-producing plants and all the blossoms rich in the production of honey after they once commenced. The spring was a month later than usual, but the honey season after it commenced continued until October. Swarms continued to issue till the 10th of September, and have generally collected enough honey to winter on; though coming off so late. I had 5-lb. honey

boxes filled and capped over, that were put on during the last week in August. Tons upon tons of honey is the result.

E. L. BRIGGS.

Wilton Junction, Iowa, Oct. 21, 1882.

Wintering Bees in Clamps.—On page 254, of *Cook's Manual*, is a brief and favorable mention of wintering bees in clamps, and I have met the recommendation in other sources of information. Having no cellar fit for winter storage of bees, but a sand bank, easy to excavate, and with perfect natural drainage, near my apiary, I intend to bury two or three colonies, as an experiment. Please give us some information on the subject in the BEE JOURNAL?

W. B.

Louisville, N. Y., Oct. 23, 1882.

[Mr. M. Quinby favored wintering bees by burying, which is practiced by many at the present day. The mode is to dig a trench in a hillside or ground with sufficient slope to insure drainage. This is partly filled in with straw, on which the hives are placed; boards are slanted up in front; wooden tubes placed in position to ventilate the pit, straw thrown on the hives, over which boards are laid lengthwise, and dirt piled over all to turn off the water.—ED.]

Well Satisfied.—I began the season with 19 colonies; increased to 56, and have taken 2,000 lbs. of extracted and 200 lbs. of comb honey. Thirty of the colonies are in two-story Langstroth hives, full of sealed honey and some brood in the lower story. By weighing the combs and averaging the surplus stores to be removed, I find that my bees have gathered about 5,668 lbs. of honey in 60 days, and have sufficient amount remaining to winter on. When I gave the report before, I had only taken a portion of the honey and averaged the rest. WM. MALONE.

Oakley, Iowa, Oct. 15, 1882.

His First Report.—As this is my third year in bee culture, and I have never made a report, I think it would be in order to do so now. My wife bought the first colony of bees three years ago. Last year we increased to 19 colonies, lost 1, sold 1, and with the remaining 17 I began this season. Our colonies now number 41. We have taken 1,435 lbs. of comb honey from them in one and two-pound sections, and 78 pounds of extracted, giving us an average of 89 lbs. per colony, spring count, and my bees are in splendid condition for winter. G. E. HILTON.

Fremont Center, Mich., Oct. 24, 1882.

Late Breeding of Queens.—I had two queens hatch on Oct. 7; three weeks later than I ever had any before. To-day (Oct. 17), both were fertilized, a thing I could hardly believe would be done. In my 23 years' experience I never had it occur before. The weather has been very warm here for several days, but not much sunshine till to-day. We have had no

frost here as yet to kill even the tenderest vines. Our fields and hills are as green as in June. H. ALLEY.

Wenham, Mass., Oct. 17, 1882.

Botanical.—I send by mail a plant called the *spider weed* here. It secretes nectar plentifully early in the morning and late in the evening. It dies down in midsummer and a second crop comes from the seed and blooms until frost. Please give correct name in BEE JOURNAL. GEO. E. BOGGS.

Milledgeville, Ga., Oct. 16, 1882.

[The plant is *Gynandropsis pentaphylla*, for which I know no common name. It is a native of the West Indies, but has become naturalized over a wide area of the southeastern States, and seems well adapted to its new home. The small family to which it belongs (*Cappariaceae*), is made up of plants having fine flowers and an abundance of nectar, of excellent quality.—T. J. BURRILL.]

How to Keep Honey.—How can we keep unripe or partly ripened honey, from June to cold weather? I extract when the bees begin to cap the cells, and sometimes have a portion of it sour.

H. M. MOYER.

Hill Church, Pa., Oct. 23, 1882.

[Keep it in an open vessel, exposed to the sun and air, where it may ripen before barreling it up. The Californians use a sun evaporator for this purpose, with success.—ED.]

Two-Story Hives for Winter.—I have two colonies of bees, in two-story hives. Will they winter as well without taking off the upper story?

WM. ROBERTS.

Vaughansville, O., Oct. 17, 1882.

[You can leave the upper story on and use it as an air-chamber over the chaff packing, if you winter on the summer stands. If you put the bees in the cellar, take off the upper story and cover, put a quilt over the frames, and leave the entrances open.—ED.]

Good Honey Crop in New York.—I have just marketed 16,800 lbs. of comb honey from 250 colonies, spring count, and increased nearly 90 per cent.

GEO. W. HOUSE.

Fayetteville, N. Y., Oct. 18, 1882.

Best Crop ever had in Illinois.—This has been one of the best seasons for bees and honey we ever had in this region.

T. G. MCGAW.

Monmouth, Ill., Oct. 23, 1882.

Almost a Failure.—Honey was almost a failure with us this year. I increased from 6 to 18 colonies, and have taken 96 lbs. of extracted, and 56 lbs. of comb honey. My bees are in good condition for winter.

CHAS. H. HISGEN.

Hopkinsville, Ky., Oct. 23, 1882.

THE AMERICAN BEE JOURNAL

ADVERTISING RATES.

20c. per agate line of space, each insertion.

A line of Agate type will contain about **eight words**; fourteen lines will occupy 1 inch of space. Transient Advertisements payable in advance. Special Notices, 50 cents per line.

DISCOUNTS will be given on advertisements published WEEKLY as follows, if the whole paid in advance:

For 4 weeks.....	10 per cent. discount
" 8 " (2 months).....	20 " "
" 13 " (3 months).....	30 " "
" 26 " (6 months).....	40 " "
" 39 " (9 months).....	50 " "
" 52 " (1 year).....	60 " "

Discount, for 1 year, in the MONTHLY alone 25 per cent., 6 months, 10 per cent., 3 months, 5 per cent., if wholly paid in advance.

Discount, for 1 year, in the SEMI-MONTHLY alone, 40 per cent., 6 months, 20 per cent., 3 months, 10 per cent., if wholly paid in advance.

Advertisements withdrawn before the expiration of the contract, will be charged the full rate for the time the advertisement is inserted.

THOMAS G. NEWMAN,
925 West Madison Street., Chicago, Ill.

Special Notices.

The American Express Company money order system is the cheapest, safest and most convenient way of remitting small sums of money. Their rates for \$1 to \$5 are 5 cents; over \$5 to \$10, 8 cents. They can be purchased at any point where the company have an office, except Canada, and can be made payable at any one of the company's 4,000 offices.

For safety, when sending money to this office get either a post office or express money order, a bank draft on New York or Chicago, or register the letter. Postage stamps of any kind may be sent for amounts less than one dollar. Local checks are subject to a discount of 25 cents at Chicago banks.

Premiums.—Those who get up clubs for the Weekly BEE JOURNAL for one year, will be entitled to the following premiums. Their own subscription may count in the club:

- For a Club of 2,—“Bees and Honey,” in paper.
 “ 3,—an Emerson Binder, or “Bees and Honey,” in cloth.
 “ 4,—Apiary Register for 50 Colonies, or Cook’s Manual, paper.
 “ 5,—Cook’s Manual in cloth, or the Apiary Register for 100 Colonies
 “ 6,—Weekly Bee Journal for 1 year, or Apiary Register for 200 Col’.

Two subscribers for the Monthly will count the same as one for the Weekly, when getting up clubs for the above premiums.

Honey and Beeswax Market.

OFFICE OF AMERICAN BEE JOURNAL, }
Monday, 10 a. m., November 1, 1882. }

The following are the latest quotations for honey and beeswax received up to this hour:

Quotations of Cash Buyers.

CHICAGO.

HONEY—I am paying 6½c. for dark and 9c. for light extracted.
 BEESWAX—Choice lots are worth 25c. here; bright yellow 24c.; dark to good, 17½c. to 22c.
 AL. H. NEWMAN, 923 W. Madison St.

CINCINNATI.

HONEY—The market for extracted honey is very satisfactory. We have received within the last three weeks more than 200 bbls., principally from Louisiana, Mississippi and Florida, and the demand exceeds our experience and expectations. We have sold more than ever at this time of the year. Florida furnishes a honey which equals our Northern clover, and excels all the Southern honey I have had so far. There is some call for comb honey, but we have had no arrivals yet of a choice article. Comb honey brings 16½c. on arrival; extracted, 7½c. BEESWAX—Firm at 20½c. per lb.
 CHAS. F. MUTH.

Quotations of Commission Merchants.

CHICAGO.

HONEY—The demand increases with the cool weather, but not sufficiently fast to keep pace with receipts, which now accumulate, as it is time to get the surplus into market. Prices remain unchanged with perhaps a tendency downward, owing to many considerers desiring to realize quickly.
 We quote: white comb, in small sections, 18½c. to 20c. Fine, well-filled, 1 lb. sections bring the outside price. Dark comb honey, little demand, 15½c. to 16c. Light honey, in larger boxes, 12½c. to 16c. Extracted—white clover, 9½c. to 10c.; dark, 8½c. to 9c., in barrels and half-barrels. Keys will bring but a small advance, if any, above half-barrels.
 BEESWAX—Very scarce. Choice Yellow, 30c.; dark to fair, 20½c. to 22c.
 R. A. BURNETT, 165 South Water St.

SAN FRANCISCO.

HONEY—Extra choice, either comb or extracted, is inquired for, and extreme figures are offered. Nearly all offered is second or third quality, for which the demand is not active at the prices demanded.
 We quote white comb, 18½c. to 20c.; dark to good, 12½c. to 15c. Extracted, choice to extra white, 9½c. to 10½c.; dark and candied, 7½c. to 8½c.
 BEESWAX—28½c. to 30c.
 STEARNS & SMITH, 423 Front Street.

ST. LOUIS.

HONEY—Prices unchanged and dull. Comb 15½c. to 18c.—latter for choice white clover in small packages; strained in round lots at 6½c. to 7c.; extracted in cans at 9½c. to 10c.
 BEESWAX—Sold fairly at 28½c. to 27c. for prime.
 R. C. GREER & CO., 117 N. Main Street.

CLEVELAND.

HONEY—In sections, has been in extraordinary demand this week, at full prices. Sales have been quite up to receipts, and all lots except recent arrivals were closed out. One pound sections of best white sells for 21½c. to 22c. per pound, in attractive packages. Same quality, in less attractive shape, 20½c. to 21c. In 1½ lb. sections, best quality, 19½c. to 20c. Second grade sells about 16½c. to 17c. per lb. less. Buckwheat is unsalable. Extracted, in small packages, pails and tin cans sells pretty well at 14½c. to 15c.; but extracted, in barrels, is very dull at 10½c. to 11c.
 BEESWAX—Prime quality, 25½c. to 26c.
 A. C. KENDEL, 115 Ontario Street.

NEW YORK.

HONEY—There is some little enquiry for fancy lots, and our quotations have been exceeded for small lots. We quote: White clover, fancy, small boxes, 19½c. to 20c.; white clover, fair to good, 16½c. to 18c. Buckwheat, 13½c. to 15c.
 BEESWAX—The receipts of wax continue rather moderate, but the high prices asked checked the demand, and the tone at the close is a trifle easier, with 31c. about the top, and only reached for strictly prime. Western, pure, 29½c. to 30c.; Southern, pure, 30c. to 31c.
 D. W. QUINBY, 105 Park Place.

BOSTON.

HONEY—Sells very readily in 1 lb. sections at 22½c. for best white and 20½c. to 22c. for 1½ lb. to 2 lb. Boxes containing ½ pound, 30 c. per pound. Extracted is selling very slowly at 12½c. to 14c.
 BEESWAX—25½c. to 26c.
 CROCKER & BLAKE, 57 Chatham Street.

Honey as Food and Medicine.

A new edition, revised and enlarged, the new pages being devoted to new Recipes for Honey Medicines, all kinds of cooking in which honey is used, and healthful and pleasant beverages.

We have put the price of them low to encourage bee-keepers to scatter them far and wide. Single copy 6 cents, postpaid; per dozen, 50 cents; per hundred, \$4.00. On orders of 100 or more, we print, if desired, on the cover-page, “Presented by,” etc., (giving the name and address of the bee-keeper who scatters them). This alone will pay him for all his trouble and expense—enabling him to dispose of his honey at home, at a good profit.

The Apiary Register.

All who intend to be systematic in their work in the apiary, should get a copy and commence to use it.

For 50 colonies (120 pages).....\$1 00
 “ 100 colonies (220 pages)..... 1 50
 “ 200 colonies (420 pages)..... 2 00

The larger ones can be used for a few colonies, give room for an increase of numbers, and still keep the record all together in one book, and are therefore the most desirable ones.

Constitutions and By-Laws for local Associations \$2.00 per 100. The name of the Association printed in the blanks for 50 cents extra.

Advertisements intended for the BEE JOURNAL must reach this office by Saturday of the previous week.

Postage stamps, of one, two or three cent denomination, accepted for fractional parts of a dollar; but money is preferred.

The BEE JOURNAL is mailed at the Chicago Postoffice every Tuesday, and any irregularity in its arrival is due to the postal employes, or some cause beyond our control.

Do not let your numbers of the BEE JOURNAL for 1881 be lost. The best way to preserve them is to procure a binder and put them in. They are very valuable for reference.

Examine the Date following your name on the wrapper label of this paper; it indicates the end of the month to which you have paid your subscription on the BEE JOURNAL.

Kendall’s Spavin Cure is used from the Atlantic to the Pacific coast.

The Monthly Bee Journal for 1883.

At the request of many who have heretofore taken the Monthly and Semi-Monthly BEE JOURNAL, we shall next year print a Monthly consisting of 32 pages, issuing it about the middle of each month, at \$1.00 a year, in advance; 2 copies for \$1.80; 3 copies for \$2.50; 5 copies for \$4.00; 10 or more copies at 75 cents each. An extra copy to the person getting up a club of 5 or more.

The Weekly is now permanently established, and will be continued as heretofore.

The Weekly and Monthly BEE JOURNALS will be distinct papers, each having its own sphere of operation and different readers.

We shall aim to make the Monthly BEE JOURNAL a welcome and profitable visitor to the homes of those who feel the need of a cheap, first class, reliable bee paper in pamphlet form—whose time is too much occupied to read a weekly, or whose means or requirements are more limited, and who can dispense with the routine matter more properly belonging to a weekly.

When changing a postoffice address, mention the old as well as the new address.

Ribbon Badges, for bee-keepers, on which are printed a large bee in gold, we send for 10 cts. each, or \$8 per 100.

Our new location, No. 925 West Madison St., is only a few doors from the new branch postoffice. We have a telephone and any one in the city wishing to talk to us through it will please call for No. 7087—that being our telephone number.

Every lady should send 25 cents to Strawbridge & Clothier, Philadelphia, and receive their *Fashion Quarterly* for six months. 1,000 illustrations and four pages new music each issue.

Advertisements.

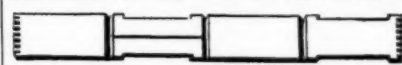
THE AMERICAN BEE JOURNAL is the oldest Bee Paper in America, and has a large circulation in every State, Territory and Province, among farmers, mechanics, professional and business men, and is, therefore, the best advertising medium.

IMPORTANT TO BEE-KEEPERS!

TWENTY-THREE years' experience in rearing queen bees. The cheapest, easiest and best way to raise queens. Never before published. Something new. Send for Circular.
44w2t HENRY ALLEY, Wenham, Mass.

LANGSTROTH AND SIMPLICITY CHAFF HIVES, with movable upper story, section boxes, metal-cornered brood frames, wide Langstroth frames and comb foundation. Send for Price List.
A. B. MILLER & SON, Wakarusa, Elkhart Co., Ind.
44wt

SECTIONS.



We make a specialty of our "Boss" One-Piece Sections. Patented June 28th, 1881. We have not sold any right to manufacture, therefore we caution the public against buying any One-Piece Sections not bearing our stamp. Send for Price List.
J. S. FORCHUCK & CO.
Watertown, Jeff. Co., Wis., Sept. 1, 1882. 38m5t

1882. JOSEPH D. ENAS, 1882.
(Sunny Side Apiary.)

Pure Italian Queens,

BEES, COLONIES, NUCLEI,

Extractors, Comb Foundation, etc.

Address, Sunny Side Apiary,
9m5t Napa P. O., Cal.

ALFRED H. NEWMAN,

Dealer in all kinds of

APIARIAN SUPPLIES,

AND

HONEY AND BEESWAX,

923 West Madison Street,

CHICAGO, ILL.

MY ILLUSTRATED CATALOGUE
sent FREE upon application.

BARNES' PATENT

Foot Power Machinery



CIRCULAR AND

SCROLL SAWS.

Hand, Circular Rip Saws for general heavy and light ripping, Lathes, &c. These machines are especially adapted to Hive Making. It will pay every bee-keeper to send for our 48-page Illustrated Catalogue.

W. F. & JOHN BARNES,
No. 2017 Main street,
Rockford, Winnebago Co. Ill.,

Vick's Illustrated Monthly Magazine.

Each Number contains 32 pages of reading, many fine Wood Cut Illustrations, and one Colored Plate. A beautiful Garden Magazine printed on elegant paper, and full of information. In English and German. Price, \$1.25 a year. Five copies, \$5.00.

Vick's Flower and Vegetable Garden, 50 cents in paper covers; in elegant cloth covers, \$1.00.
Vick's Catalogue—300 illustrations, only 2 cts.
Address, JAMES VICK, Rochester, N. Y.

DARWINISM with its theory of the evolution of man from the animals and his extinction at death overthrown. A personal God and an eternal existence for man proven by science. Infidelity and Materialism dethroned. The Waste theory of Sound, taught in colleges and high schools for 2,000 years, proven to be a stupendous scientific fallacy. Revolutionary in Science and the most remarkable book of this or any other age. Royal Octavo, 528 double column pages, handsomely bound and containing very superior likenesses of the great scientists of the age, Darwin, Huxley, Hensholtz, Mayor, Tyndall and Haeckel. \$2. by mail, postpaid. Local and Travelling Agents Wanted. Circulars, with table of contents and "opinions of the press," and of Clergymen, Professors in Colleges, etc., free to all.
SCHELL & CO., 52 Broadway, N. Y.

Advance in Foundation.

The manufacturers of Comb Foundation have advanced the price 5 cents per pound, owing to the increased cost of Beeswax.

Until further notice, the price of all the styles and kinds of Foundation, except the VanDeusen (flat bottom), will be

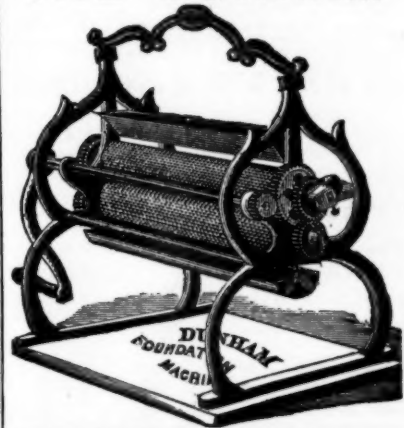
Advanced 5 Cents per pound,
from the advertised price in my Catalogue.

ALFRED H. NEWMAN,
923 West Madison Street, CHICAGO, ILL.

FRANCES DUNHAM,

Inventor and Sole Manufacturer of

THE DUNHAM



FOUNDATION MACHINE.

Patented Aug. 23d, 1881.

Send for New Circular for January, 1882.

CAUTION.

Having obtained LETTERS PATENT Number 246,099 for Dunham Foundation Machine, making comb foundation with base of cells of natural shape, and side-walls brought up to form an even surface; also on the foundation made on said machine, I hereby give notice to all parties infringing my rights, either by manufacturing said machines or foundation, as well as to all parties purchasing machines as above, other than of my manufacture, that I am prepared to protect my rights, and shall prosecute all infringements to the full extent of the law.
FRANCES A. DUNHAM,
DePere, Wis.
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